

CLAIMS

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent is:

1. A method for determining the identity of a person comprising:
a prior enrollment stage including steps of:
 - a) applying a stimulus to a user of the person to be identified;
 - b) detecting that user's response;
 - c) generating a model representing that user's response to said stimulus and storing said model; and,
a subsequent recognition stage including the step of:
 - d) presenting said stimulus to the user to be identified;
 - e) detecting that user's response;
 - f) comparing said user's response with said stored user's model representing the response for that user; and,
 - g) determining whether said user is the same if a match exists as a result of said comparison.
2. The method for determining the identity of a person as claimed in Claim 1, wherein said stimulus comprises one or more from the group comprising: audio, visual and olfactory stimuli.
3. The method for determining the identity of a person as claimed in Claim 1, wherein said stimulus comprises one of: speech or spoken words stimuli.
4. The method for determining the identity of a person as claimed in Claim 1, wherein said stimulus comprises administration of a psychological profile test.
5. The method for determining the identity of a person as claimed in Claim 1, wherein said steps b) and e) of detecting a user's response comprises applying a sensor means for detecting a user's emotional or physical response characteristics.

6. The method for determining the identity of a person as claimed in Claim 5, wherein said user's emotional response characteristics includes one or more of: audible emotional cues or visual emotional cues.
7. The method for determining the identity of a person as claimed in Claim 5, wherein said sensor means for detecting a user's physical response comprises an Electroencephalograph (EEG), wherein said user's response comprises EEG signals.
8. The method for determining the identity of a person as claimed in Claim 5, wherein said sensor means for detecting a user's physical response characteristics includes a polygraph machine, said user's response comprising polygraph measurement signals.
9. The method for determining the identity of a person as claimed in Claim 1, wherein said comparing step f) includes evaluating how consistent the user's response is to similar stimuli as previously applied during said enrollment stage.
10. The method for determining the identity of a person as claimed in Claim 9, wherein during said enrollment stage, said generated model includes a data structure representative of said user's behavior, and during said recognition stage, said step of generating a data structure representing said user's detected behavioral response, wherein said step of evaluating consistency of the user's response including the step of determining a distance between said stored data structure generated during enrollment and said data structure obtained during said recognition.
11. A system for determining the identity of a person comprising:
 - a) means for applying a stimulus to a user of the person to be identified during a prior enrollment stage and during a subsequent recognition stage;
 - b) means for detecting that user's response during both said enrollment and subsequent recognition stages;
 - c) means for generating a model representing that user's response to said stimulus during said prior enrollment stage and storing said model; and

d) means for comparing said user's response with said stored user's model representing the response for that user, whereby an identity of said user may be confirmed if a match exists as a result of said comparison.

12. The system for determining the identity of a person as claimed in Claim 11, wherein said stimulus comprises one or more from the group comprising: audio, visual and olfactory stimuli.

13. The system for determining the identity of a person as claimed in Claim 11, wherein said stimulus comprises administration of a psychological profile test.

14. The system for determining the identity of a person as claimed in Claim 11, wherein said means for detecting a user's response comprises a sensor means for detecting a user's emotional or physical response characteristics, said user's emotional response characteristics including one or more selected from the group comprising: audible emotional cues or visual emotional cues.

15. The system for determining the identity of a person as claimed in Claim 14, wherein said sensor means for detecting a user's physical response characteristics includes an Electroencephalograph (EEG), said behavioral response comprising EEG signals.

16. The system for determining the identity of a person as claimed in Claim 14, wherein said sensor means for detecting a user's physical response characteristics includes a polygraph machine, said behavioral response comprising polygraph measurement signals.

17. The system for determining the identity of a person as claimed in Claim 11, wherein said means for comparing said user's response with said stored user's model includes evaluating how consistent the user's response is to similar stimuli as previously applied during said enrollment stage.

18. A method for authenticating a person's identity comprising the steps of:

- a) generating a behavioral profile for a person by presenting that person with various stimulus and measuring that person's response characteristics;
- b) storing said person's behavioral profile;
- c) subsequently presenting said person with the stimulus presented at the time of generating said person's behavioral profile and detecting said person's behavioral response; and,
- d) comparing the person's behavioral response to his/her behavioral profile.

19. The method for authenticating a person's identity as claimed in Claim 18, wherein said step c) comprises the steps of:

presenting the person with stimulus different from the stimulus presented at the time of generating that user's behavioral profile; and,

projecting what is the expected behavioral response to the unseen stimuli based on his/her behavioral profile, and subsequently comparing the person's response to the expected response.

20. The method for authenticating a person's identity as claimed in Claim 19, further comprising the steps of: identifying the identity of a person by:

presenting stimuli to a user as would be presented during an enrollment stage;

measuring that person's behavioral response characteristics; and,

searching for a behavioral profile that matches the user's behavioral response characteristics to said presented stimuli, said matching comprising either a direct match or a projected match.